CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application. Claims 32- 62 are pending.

32. (**PREVIOUSLY PRESENTED**) An assay system for grading a substance so as to assess, in a standardized manner, its anti-inflammatory activity, said assay system comprising: (i) injection of a suitable antigen, into an appropriate body part of a mammal; (ii) either injection of a predetermined amount of said test substance into the same body part, or topical application to said mammal of a predetermined amount of said substance; (iii) measurement of the degree to which swelling which would otherwise result from injection of said antigen is reduced or alleviated ; and (iv) comparing the activity of said test substance, as measured in step (iii), against the activity of a standard compound having known anti-inflammatory characteristics, the activity of said standard compound having been measured by this same assay system of steps (i) to (iii), and having been used to generate a grading system to compare the efficacy of various of the assessed substances.

33. (**PREVIOUSLY PRESENTED**) An assay system according to claim 32, wherein said substance is selected from the group consisting of oils, fats, organic solvent extracts of oils and fats, preparations comprising oils, preparations comprising fats, biologically

active components of oils, and biologically active components of fats.

34. (**PREVIOUSLY PRESENTED**) An assay system according to claim 33, wherein said substance is selected from the group consisting of animal oils and plant oils.

35. (**CURRENTLY AMENDED**) An assay system according to claim 34 wherein the oil is selected from the group consisting of tea tree oil, flaxseed oil, linseed oil, borage oil and evening primrose oil; fish oils; and algal, microbial and ~~fungi~~ fungal oils.

36. (**PREVIOUSLY PRESENTED**) An assay system according to claim 33, wherein said substance is emu oil or an ethanol extract of emu oil.

37. (**PREVIOUSLY PRESENTED**) An assay system according to claim 32 wherein, in step (i), said antigen is injected intraperitoneally or into a footpad or ear of said mammal.

38. (**PREVIOUSLY PRESENTED**) An assay system according to claim 32, wherein said antigen is Carrageenan or sheep red blood cells.

39. (**PREVIOUSLY PRESENTED**) An assay system according to claim 32 wherein, in step (ii), said substance is injected intraperitoneally or applied topically.

40. (**PREVIOUSLY PRESENTED**) An assay system according to claim 32 wherein steps (i) to (iv) are repeated, using serially reducing amounts of said substance.

41. (**PREVIOUSLY PRESENTED**) An assay system according to claim 40, wherein said substance is serially diluted in ethanol.

42. (**PREVIOUSLY PRESENTED**) An assay system for grading a substance so as to assess, in a standardized manner, its anti-inflammatory activity, said assay system comprising:

(i) measurement of the activity of an in vitro preparation of T-cells, macrophages or neutrophils, or a cell line derived therefrom;

(ii) addition of said substance to said preparation of T-cells, macrophages or neutrophils, or said cell line derived therefrom;

(iii) measurement of the change in activity of said preparation of T-cells, macrophages or neutrophils, or said cell line derived therefrom, following addition of said substance in step (ii); and

(iv) comparing the change in activity, as measured in step (iii), for said substance against the change in activity for a standard compound having known anti-inflammatory characteristics, the change in activity for the standard compound having been measured by this same assay system of steps (i) to (iii), and having been used to generate a grading system to compare the efficacy of various of the assessed substances.

43. (**PREVIOUSLY PRESENTED**) An assay system according to claim 42, wherein said substance is selected from the group consisting of oils, fats, organic solvent extracts of oils and fats, preparations comprising oils, preparations comprising fats, biologically active components of oils, and biologically active components of fats.

44. (**PREVIOUSLY PRESENTED**) An assay system according to claim 43, wherein said substance is selected from the group consisting of animal oils and plant oils.

45. (**CURRENTLY AMENDED**) An assay system according to claim 44 wherein said oil is selected from the group consisting of tea tree oil, flaxseed oil, linseed oil, borage oil and evening primrose oil; fish oils; and algal, microbial and ~~fungi~~ fungal oils.

46. (**PREVIOUSLY PRESENTED**) An assay system according to claim 43, wherein said substance is emu oil or an ethanol extract of emu oil.

47. (**PREVIOUSLY PRESENTED**) An assay system according to claim 42, wherein said preparation is a preparation of T lymphocytes and said activity is lymphoproliferation.

48. (**PREVIOUSLY PRESENTED**) An assay system according to claim 42, wherein said preparation is a preparation of T lymphocytes and said activity is production of cytokines.

49. (**PREVIOUSLY PRESENTED**) An assay system according to claim 48, wherein said cytokines are selected from the group consisting of interleukin-2, tumor necrosis factors and interferon-γ.

50. (**PREVIOUSLY PRESENTED**) An assay system according to claim 42, wherein said preparation is a preparation of neutrophils and said activity is chemotaxis.

51. (**PREVIOUSLY PRESENTED**) An assay system according to claim 42, wherein said preparation is a preparation of neutrophils and said activity is adherence to endothelial cells.

52. (**PREVIOUSLY PRESENTED**) An assay system according to claim 42, wherein steps (i) to (iv) are repeated, using serially reducing amounts of said substance.

53. (**PREVIOUSLY PRESENTED**) An assay system according to claim 52, wherein said substance is serially diluted in ethanol.

54. (**PREVIOUSLY PRESENTED**) A method of preparing a therapeutically active emu

oil, comprising the heating of emu oil or tissue which contains emu oil to a temperature of at least 40° C in order to obtain the active components of the oil or tissue.

55. (**PREVIOUSLY PRESENTED**) The method of claim 54, wherein the heating temperature is in the range of about 40° to 100° C.

56. (**PREVIOUSLY PRESENTED**) The method of claim 54, wherein the heating temperature is in the range of about 60° to 80°C.

57. (**PREVIOUSLY PRESENTED**) The method of claim 54, wherein said temperature is about 60° C.

58. (**PREVIOUSLY PRESENTED**) The method of claim 54, wherein said temperature is about 80° C.

59. (**PREVIOUSLY PRESENTED**) The method of claim 54, wherein the heating temperature is about 100° C.

60. (**PREVIOUSLY PRESENTED**) A method of preparing a therapeutically active fraction from emu oil or emu oil containing tissue, comprising extracting said oil or tissue with an organic solvent to obtain the active components of the oil or tissue.

61. (**PREVIOUSLY PRESENTED**) The method of claim 60, wherein the organic solvent is an alcohol.

62. (**PREVIOUSLY PRESENTED**) The method of claim 61, wherein the alcohol is ethanol.